(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 6 October 2005 (06.10.2005)

PCT

(10) International Publication Number WO 2005/093826 A1

(51) International Patent Classification⁷: H01L 23/02, 27/14

(21) International Application Number:

PCT/JP2005/005999

(22) International Filing Date: 23 March 2005 (23.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

2004-093628 26 March 2004 (26.03.2004) JP 2004-281895 28 September 2004 (28.09.2004) JP

(71) Applicant (for all designated States except US): FUJI PHOTO FILM CO., LTD. [JP/JP]; 210, Nakanuma, Minami-ashigara-shi, Kanagawa 2500193 (JP).

(72) Inventors; and

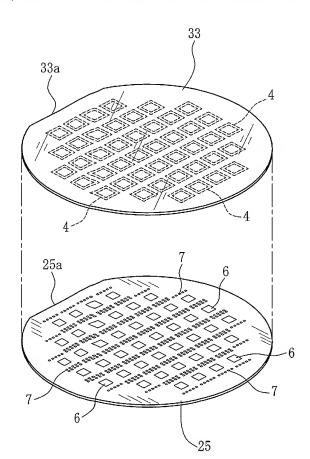
(75) Inventors/Applicants (for US only): TAKASAKI,

Kosuke [JP/JP]; c/o Fuji Photo Film Co., Ltd., 210, Nakanuma, Minami-ashigara-shi, Kanagawa 2500193 (JP). YAMAMOTO, Kiyofumi [JP/JP]; c/o Fuji Photo Film Co., Ltd., 210, Nakanuma, Minami-ashigara-shi, Kanagawa 2500193 (JP). OKUTSU, Kazuo [JP/JP]; c/o FUji Photo Film Co., Ltd., 210, Nakanuma, Minami-ashigara-shi, Kanagawa 2500193 (JP). TSU-JIMURA, Koji [JP/JP]; c/o Fuji Photo Film Co., Ltd., 210, Nakanuma, Minami-ashigara-shi, Kanagawa 2500193 (JP).

- (74) Agents: KOBAYASHI, Kazunori et al.; Taiyo-seimei-ot-suka Bldg., 3F, 25-1, Kita-otsuka 2-chome, Toshima-ku, Tokyo 1700004 (JP).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG,

[Continued on next page]

(54) Title: DEVICE AND METHOD FOR JOINING SUBSTRATES



(57) Abstract: A device for joining substrates (11) is provided inside a clean booth (12). a single axis robot (46) and a five axis robot (47) convey a wafer (25) and a glass substrate (33). A transcribing station (91) obtains a transcribing film (112) on which adhesive is applied from a film supplying section (113), and presses the transcribing film (112) to the glass substrate (33) so as to transcribe the adhesive to the glass substrate (33). A peeling station (92) peels the transcribing film (112) from the glass substrate (33). A joining station (57) positions the wafer (25) and the glass substrate (33), adjusts parallelism of joining surfaces of the wafer (25) and the glass substrate (33), and joins these substrates together. Since the handling and the joining of the wafer (25), the glass substrate (33) and the transcribing film (112) are performed in the clean booth, it is prevented that a yield ratio of the product decreases because of the adhesion of foreign matters.

WO 2005/093826 A1

KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,

FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.